Insulin Products

Last Updated 03/2025

***Note:** Action profiles in this chart are approximations

Rapid-Acting

100 U/mL vial (3 or 10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Admelog [SoloStar, Vial]
Insulin lispro (analog)
Duration: 3-5 hours

4 U/INH
8 U/INH
12 U/INH
(single-dose cartridges)

Afrezza
Inhaled powdered insulin (human, ultra-rapid)
Duration: 2.5-3 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Apidra [SoloStar, Vial]
Insulin glulisine (analog)
Duration: 3-5 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box
100 U/mL cart. (3 or 1.6 mL)

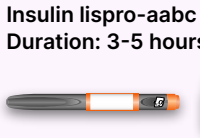
Fiasp [FlexTouch, Vial, PenFill, PumpCart]
Insulin aspart (analog, ultra-rapid)
Duration: 3-5 hours

100 U/mL vial (3 or 10 mL)
100 U/mL pen (3 mL) - **5 pens**/box
200 U/mL pen (3 mL) - **2 pens**/box

Humalog [KwikPen, Jr KwikPen, Tempo Pen, Vial]
Insulin lispro (analog)
Duration: 3-5 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box
200 U/mL pen (3 mL) - **2 pens**/box

Lyumjev [KwikPen, Jr KwikPen, Tempo Pen, Vial]
Insulin lispro-aabc (analog, ultra-rapid)
Duration: 3-5 hours



100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Merilog [SoloStar, Vial]
Insulin aspart-szjj (analog, biosimilar*)
Duration: 3-5 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box
100 U/mL cart. (3 mL)

NovoLog [FlexPen, Vial, PenFill]
Insulin aspart (analog)
Duration: 3-5 hours

Short-Acting

100 U/mL vial (3 or 10 mL)

Humulin R (U-100) [Vial]
Regular insulin (human)
Duration: 6-8 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Novolin R [FlexPen, Vial]
Regular insulin (human)
Duration: 6-8 hours

1 U/mL single-dose container (100 mL)

Myxredlin
Regular insulin (human) IV solution

Intermediate-Acting

100 U/mL vial (3 or 10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Humulin N (U-100) [KwikPen, Vial]
Insulin isophane or NPH (human)
Duration: 14-18 hours

500 U/mL vial (20 mL)
500 U/mL pen (3 mL) - **2 pens**/box

Humulin R (U-500) [KwikPen, Vial]
Regular insulin (human)
Duration: ~21 hours (13-24 h)

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Novolin N (U-100) [FlexPen, Vial]
Insulin isophane or NPH (human)
Duration: 14-18 hours

Intermediate + Rapid-Acting

100 U/mL pen (3 mL) - **1 or 5 pens**/box

Humalog Mix 50/50 [KwikPen]
Insulin lispro protamine (50%)/lispro (50%) (analog)
Duration: Up to 24 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Humalog Mix 75/25 [KwikPen, Vial]
Insulin lispro protamine (75%)/lispro (25%) (analog)
Duration: Up to 24 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

NovoLog Mix 70/30 [FlexPen, Vial]
Insulin aspart protamine (70%)/aspart (30%) (analog)
Duration: Up to 24 hours

Intermediate + Short-Acting

100 U/mL vial (3 or 10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Humulin 70/30 [KwikPen, Vial]
Insulin isophane (70%)/regular insulin (30%) (human)
Duration: Up to 24 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Novolin 70/30 [FlexPen, Vial]
Insulin isophane (70%)/regular insulin (30%) (human)
Duration: Up to 24 hours

Long-Acting

100 U/mL pen (3 mL) - **5 pens**/box

Basaglar [KwikPen, Tempo Pen]
Insulin glargine (analog)
Duration: 24-30 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box

Lantus [SoloStar, Vial]
Insulin glargine (analog)
Duration: 24-30 hours

100 U/mL pen (3 mL) - **5 pens**/box

Rezvoglar [KwikPen]
Insulin glargine-aglr (analog, biosimilar*)
Duration: 24-30 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **1 or 5 pens**/box

Semglee [Pen, Vial]
Insulin glargine-yfgn (analog, biosimilar*)
Duration: 24-30 hours

300 U/mL pen (1.5 mL) - **3 pens**/box
300 U/mL pen (3 mL) - **2 pens**/box

Toujeo [SoloStar, Max SoloStar]
Insulin glargine (analog)
Duration: Up to 36 hours

100 U/mL vial (10 mL)
100 U/mL pen (3 mL) - **5 pens**/box
200 U/mL pen (3 mL) - **3 pens**/box

Tresiba [FlexTouch, Vial]
Insulin degludec (analog, ultra-long)
Duration: 36-42 hours

Long-Acting + GLP-1 RA

(glucagon-like peptide 1 receptor agonist)

100 U/33 mcg per mL pen (3 mL) - **5 pens**/box

Soliqua [SoloStar]
Insulin glargine + lixisenatide (analog)
Duration: 24-30 hours (glargine)

100 U/3.6 mg per mL pen (3 mL) - **5 pens**/box

Xultophy [Pen]
Insulin degludec + liraglutide (analog)
Duration: Up to 42 hours (degludec)

*Insulin Biosimilars

At the time of writing (March 2025), there are **three** insulin biosimilars available in the United States:

1. **Rezvoglar** (insulin glargine-aglr)
2. **Semglee** (insulin glargine-yfgn)
3. **Merilog** (insulin aspart-szjj)

Rezvoglar and Semglee are **interchangeable** biosimilars of **Lantus**. It should be noted that these two products are **not biosimilars of Basaglar** (another distinct insulin glargine reference product), nor are they interchangeable with each other. Merilog is a biosimilar of **NovoLog**. Refer to the **FDA's Purple Book** for the most up-to-date list of approved biosimilars.

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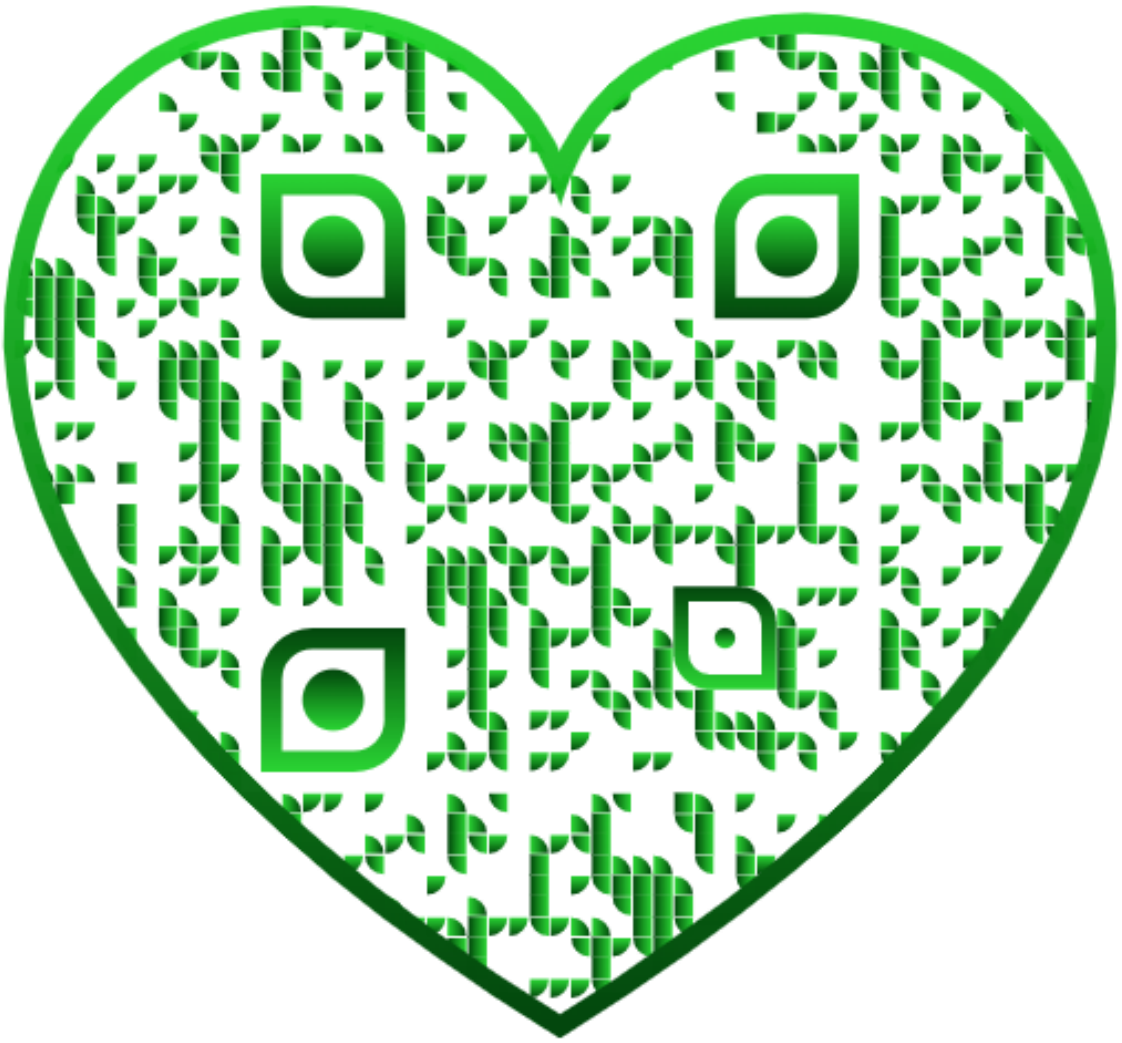


Insulin Products Storage

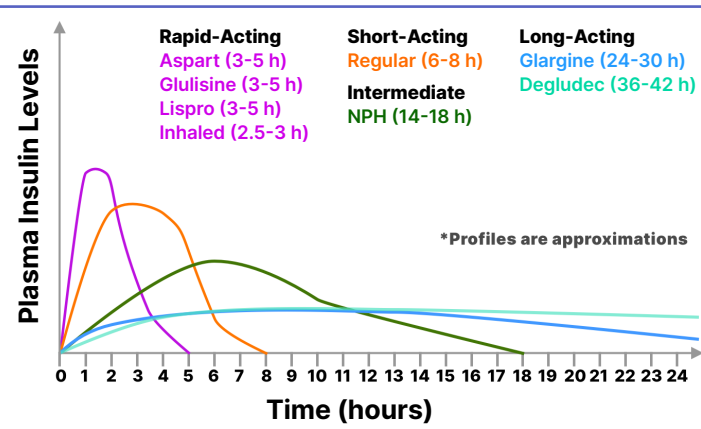
Last Updated 03/2025

All products are good until their expiration date* when kept **unopened and refrigerated** (36°F-46°F [2°C-8°C]).

BRAND	GENERIC	DAYS GOOD AT ROOM TEMP (≤86° F [30°C]) WHEN IN-USE	STORAGE WHEN OPENED/IN-USE
Admelog SoloStar pen	Insulin lispro	28 days	**Do not refrigerate**
Admelog vial	Insulin lispro	28 days	Room or Refrigerated (≤86° F [30°C])
Afrezza*	Insulin human (inhaled)	10 days (sealed blisters & strips); 3 days (opened strips)	**77°F (25°C)** (excursions permitted 59-86°F [15-30°C])
Apidra SoloStar pen	Insulin glulisine	28 days (≤77° F [25°C])	**≤ 77°F (25°C), but do not refrigerate**
Apidra vial	Insulin glulisine	28 days (≤77° F [25°C])	Room or Refrigerated (≤77°F [25°C])
Basaglar KwikPen/Tempo Pen	Insuline glargine	28 days	**Do not refrigerate**
Fiasp FlexTouch pen	Insulin aspart	28 days	Room or Refrigerated (≤86°F [30°C])
Fiasp PenFill cartridge	Insulin aspart	28 days	**Do not refrigerate**
Fiasp PumpCart cartridge	Insulin aspart	**4 days (≤98.6° F [37°C])**	**≤98.6° F (37°C), but do not refrigerate**
Fiasp vial	Insulin aspart	28 days	Room or Refrigerated (≤86°F [30°C])
Humalog KwikPen	Insulin lispro	28 days	**Do not refrigerate**
Humalog vial	Insulin lispro	28 days	Room or Refrigerated (≤86°F [30°C])
Humalog Junior KwikPen	Insulin lispro	28 days	**Do not refrigerate**
Humalog Tempo Pen	Insulin lispro	28 days	**Do not refrigerate**
Humalog Mix 50/50 KwikPen	Insulin lispro protamine/lispro	**10 days**	**Do not refrigerate**
Humalog Mix 75/25 KwikPen	Insulin lispro protamine/lispro	**10 days**	**Do not refrigerate**
Humalog Mix 75/25 vial	Insulin lispro protamine/lispro	28 days	Room or Refrigerated (≤86°F [30°C])
Humulin N KwikPen	NPH	**14 days**	**Do not refrigerate**
Humulin N vial	NPH	**31 days**	Room or Refrigerated (≤86°F [30°C])
Humulin R vial	Insulin human (regular)	**31 days**	Room or Refrigerated (≤86°F [30°C])
Humulin R U-500 KwikPen	Insulin human (regular)	28 days	**Do not refrigerate**
Humulin R U-500 vial	Insulin human (regular)	**40 days**	Room or Refrigerated (≤86°F [30°C])
Humulin 70/30 KwikPen	NPH/regular	**10 days**	**Do not refrigerate**
Humulin 70/30 vial	NPH/regular	**31 days**	Room or Refrigerated (≤86°F [30°C])
Lantus SoloStar pen	Insulin glargine	28 days	**Do not refrigerate**
Lantus vial	Insulin glargine	28 days	Room or Refrigerated (≤86°F [30°C])
Lyumjev pen	Insulin lispro-aabc	28 days	**Do not refrigerate**
Lyumjev vial	Insulin lispro-aabc	28 days	Room or Refrigerated (≤86°F [30°C])
Merilog SoloStar pen	Insulin aspart-szjj	28 days	**Do not refrigerate**
Merilog vial	Insulin aspart-szjj	28 days	Room or Refrigerated (≤86°F [30°C])
Novolin N FlexPen	NPH	28 days	**Do not refrigerate**
Novolin N vial	NPH	**42 days (≤77° F [25°C])**	**≤77°F (25°C), but do not refrigerate**
Novolin R FlexPen	Insulin human (regular)	28 days	**Do not refrigerate**
Novolin R vial	Insulin human (regular)	**42 days (≤77° F [25°C])**	**≤77°F (25°C), but do not refrigerate**
Novolin 70/30 FlexPen	NPH/Regular	28 days	**Do not refrigerate**
Novolin 70/30 vial	NPH/Regular	**42 days (≤77° F [25°C])**	**≤77°F (25°C), but do not refrigerate**
NovoLog FlexPen	Insulin aspart	28 days	**Do not refrigerate**
NovoLog vial	Insulin aspart	28 days	Room or Refrigerated (≤86°F [30°C])
NovoLog PenFill cartridge	Insulin aspart	28 days	**Do not refrigerate**
NovoLog Mix 70/30 FlexPen	Insulin aspart protamine/aspart	**14 days**	**Do not refrigerate**
NovoLog Mix 70/30 vial	Insulin aspart protamine/aspart	28 days	Room or Refrigerated (≤86°F [30°C])
Rezvoglar KwikPen	Insulin glargine-aglr	28 days	**Do not refrigerate**
Semglee pen	Insulin glargine-yfgn	28 days	**Do not refrigerate**
Semglee vial	Insulin glargine-yfgn	28 days	Room or Refrigerated (≤86°F [30°C])
Soliqua 100/33	Insulin glargine + lixisenatide	28 days (≤77° F [25°C])	**≤77°F (25°C), but do not refrigerate**
Toujeo (Max) SoloStar pen	Insulin glargine	**56 days**	**Do not refrigerate**
Tresiba FlexTouch pen	Insulin degludec	**56 days**	Room or Refrigerated (≤86°F [30°C])
Tresiba vial	Insulin degludec	**56 days**	Room or Refrigerated (≤86°F [30°C])
Xultophy 100/3.6	Insulin degludec + liraglutide	**21 days**	Room or Refrigerated (≤86°F [30°C])

*For **Afrezza**: Unopened, refrigerated **foil packages** may be stored until the expiration date. Unopened, refrigerated **blister cards and strips** must be used **within 1 month**.

Insulin Classes and Action Profiles*



Priming Insulin Pens

Prime insulin pens prior to each injection with **2 units except** the following:

Humulin® R U-500 KwikPen	5 units
Toujeo® SoloStar	3 units
Toujeo® Max SoloStar	4 units
Xultophy® Pen	Select priming symbol

References available at pyrls.com

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